

## **REMARKS**

Claims 22-34 are pending in the application. The Examiner has maintained the restriction requirement. Group I claims 22-32 are under examination, and Group II claims 33 and 34 have been withdrawn from consideration. The Examiner maintained the species election requirement and noted that Applicants selected the marker identified by SEQ ID NO:32 and the primer pair identified by SEQ NO:124 and SEQ ID NO:125. Claims 22-32 are rejected under 35 U.S.C. 112, second paragraph.

### Comments regarding species election requirement

Applicants reassert their arguments concerning the election of species requirement. Applicants' representative, Jill A. Fahrlander, was told by both Examiner Martinell and Examiner Martinell's supervisor, Michael Woodward, that it is now the practice of their Group Art Unit to examine only a single sequence. Neither Examiner Martinell nor Supervisor Woodward cited any authority for failing to follow MPEP §803.04. Applicants respectfully submit that this unofficial policy adopted by the USPTO is grossly unfair to Applicants. The apparent wholesale change in policy was without any public notice, was made without opportunity for public comment, and presents a tremendous increase in costs associated with patent procurement that disproportionately affects those in a particular technology.

Pursuant to 37 C.F.R. 1.144 and 37 C.F.R. 1.181, Applicants are petitioning the Commissioner from the Examiner's species election requirement.

### Comments regarding drawings

The Examiner stated that unless a proposed drawing correction or corrected drawings were submitted with the response, the application would be abandoned. Applicants submit herewith corrected formal drawings that are believed to overcome the draftsman's objections.

### Rejections under 35 U.S.C. 112, second paragraph


The Examiner has rejected claims 22-32 under 35 U.S.C. 112, second paragraph as being vague and indefinite for the recitation of sequences outside the species elected, with traverse, by Applicants for examination on the merits. Applicants have amended claims 22, 26, 30, and 31 to recite the specific sequence or sequences of the elected marker or primers.

In view of the amendments above and the arguments below, Applicants respectfully request reconsideration on the merits and allowance of the claims.

This amendment is accompanied by check number 47313 in the amount of \$240.00 to cover the fees required under 37 C.F.R. 1.17(a)(1), 37 C.F.R. 1.144 and 37 C.F.R. 1.181. No other fee is believed due in connection with submission. However, if any fee is owing, please charge such fee to Deposit Account No. 50-0842.

Respectfully submitted,

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## MARKED UP VERSION SHOWING CLEARLY THE AMENDMENTS

22. (Twice amended) A method for detecting a target intermediate tandem repeat DNA sequence having a low incidence of stutter artifacts, comprising the steps of:

(a) providing a sample of DNA having at least one target intermediate tandem repeat sequence, wherein the target intermediate tandem repeat sequence is a region of the DNA containing at least one repeat unit consisting of a sequence of five (5), six (6), or seven (7) base pairs repeated in tandem at least two (2) times; and

(b) amplifying the target intermediate tandem repeat sequence using at least one oligonucleotide primer, comprising a sequence which is complementary to and flanks a region of a double-stranded DNA marker containing a template intermediate tandem repeat sequence, wherein the template intermediate tandem repeat sequence is a region of the DNA marker which contains the repeat unit sequence repeated in tandem at least two (2) times, provided that the DNA marker has a sequence [selected from the group consisting] of [SEQ ID NO:28,] SEQ ID NO:32[, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43]; and

(c) detecting the target intermediate tandem repeat sequence in the sample of DNA, wherein an average stutter artifact of no more than 2.4% is observed.

26. (Twice amended)

A method for detecting at least one target intermediate tandem repeat sequence in a DNA sample, wherein the target intermediate tandem repeat sequence is a region of the DNA sample which contains at least one repeat unit consisting of a sequence of five (5), six (6), or seven (7) base pairs repeated in tandem at least two (2) times; the method comprising the steps of:

(a) providing at least one oligonucleotide primer comprising a nucleic acid sequence which is complementary to and flanks a region of a DNA marker containing a template intermediate tandem repeat sequence, wherein the DNA marker has a sequence [selected from the group of sequences consisting] of [SEQ ID NO:28,] SEQ ID NO:32[, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43];

(b) providing a DNA sample comprising the target intermediate tandem repeat sequence;

- (c) using the at least one oligonucleotide primer to amplify the target intermediate repeat sequence of the DNA sample; and
- (d) detecting polymorphisms in the amplified target intermediate tandem repeat sequence.

30. (Twice amended) The method of claim 26, wherein the oligonucleotide primer provided in step (a) comprises a sequence [selected from one of the groups of sequences consisting] of[:

SEQ ID NO:116 and SEQ ID NO:117, when the DNA marker sequence is SEQ ID NO:28;]

SEQ ID NO:124 and SEQ ID NO:125, when the DNA marker sequence is SEQ ID NO:32[;

SEQ ID NO:132 and SEQ ID NO:133, when the DNA marker sequence is SEQ ID NO:36;

SEQ ID NO:134 and SEQ ID NO:135, when the DNA marker sequence is SEQ ID NO:37;

SEQ ID NO:136 and SEQ ID NO:137, when the DNA marker sequence is SEQ ID NO:38;

SEQ ID NO:138 and SEQ ID NO:139, when the DNA marker sequence is SEQ ID NO:39;

SEQ ID NO:140 and SEQ ID NO:141, when the DNA marker sequence is SEQ ID NO:40;

SEQ ID NO:142 and SEQ ID NO:143, when the DNA marker sequence is SEQ ID NO:41;

SEQ ID NO:144 and SEQ ID NO:145, when the DNA marker sequence is SEQ ID NO:42; and

SEQ ID NO:146 and SEQ ID NO:147, when the DNA marker sequence is SEQ ID NO:43].

31. (Twice amended) A kit for the detection of at least one target intermediate tandem repeat sequence in a sample of DNA, wherein the target intermediate tandem repeat sequence is a region of the sample of DNA which contains at least one repeat unit consisting of a sequence of five (5), six (6), or seven (7) base pairs repeated in tandem at least two (2) times comprising:

a container which has at least one oligonucleotide primer for amplifying the at least one target intermediate tandem repeat sequence, wherein the oligonucleotide primer comprises a sequence of nucleic acids which is complementary to and flanks a region of a double-stranded DNA marker containing a template intermediate tandem repeat sequence comprising the repeat unit repeated in tandem at least two (2) times; and wherein the DNA marker has a sequence [selected from the group consisting] of [SEQ ID NO:28,] SEQ ID NO:32[, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43].